


Stokesley Rural District Council.

MEDICAL OFFICER'S
ANNUAL REPORT
FOR THE YEAR
1920.





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STOKESLEY RURAL DISTRICT COUNCIL.

Medical Officer's Annual Report for
the Year 1920.

MR. CHAIRMAN AND GENTLEMEN,

I have again the pleasure of presenting to you my Annual Report on the mortality and sanitary condition of your District for the year 1920.

The estimated population for the District as supplied by the Registrar General is 11,816 for the year 1920.

There was registered during the year 316 births, and to this number there are three more to be added which occurred outside the District, making the correct number 319, and giving a birth-rate of 27.00 per 1,000 inhabitants. There has not been such a large number of births since the year 1892 when the number was 322, with a birth-rate of 28.95 per 1,000.

The birth-rate for England and Wales is 25.4 per 1,000.

There were 157 males and 162 females born, and 19 of them were illegitimate. In 1919, there were 209 births, and 14 were illegitimate. 77 of the births occurred at Great Ayton, 59 at Yarm, and 44 at Stokesley.

During the past year there have been 157 deaths in the District, against 166 in 1919, giving a death-rate of 13.27 per 1,000.

The death-rate for England and Wales is 12.4 per 1,000.

85 males and 72 females died during the year.

There were 17 deaths of children under 1 year old, giving an infant death-rate of 53.2 per 1,000 births. Last year the rate was 110 per 1,000, and is therefore for once very satisfactory.

The death-rate for England and Wales is 80 per 1,000 births.

According to ages, the deaths in the different districts have been thus distributed:—

PARISHES.	All Ages.	Under 1 year.	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards
Stokesley ...	35	5	...	2	3	3	1	5	16
Great Ayton	21	3	...	...	..	2	3	5	8
Yarm ...	21	3	1	2	1	1	1	5	7
Broughton District ..	20	1	...	...	...	1	3	3	12
Hutton District ...	15	1	..	...	...	...	1	3	10
Whorlton District ...	12	1	...	...	...	..	1	5	5
Remainder of District	33	3	...	2	2	1	1	4	20
Total ...	157	17	1	6	6	8	11	30	78
Total for 1919	166	23	4	3	5	10	19	41	61

A comparison with the number of deaths at the different ages between the two years is very satisfactory, except those between the ages of 2 and 15 years, where there is an increase of four; this is also due to what may be called preventable diseases, namely, 4 occurring from diphtheria. There were none in 1919.

There was a great increase in the number of deaths at Stokesley in comparison with the year 1919, when it was abnormally low, viz., 15. It was not due to any special cause, the increase having occurred from Diphtheria 1, Influenza 1, Tubercular disease 2, Cancer 4, Rheumatic Fever 2, and Cirrhosis of the Liver 2: there were no deaths from these diseases in 1919. The death-rate in Infants was also above the average for this District.

In the other Districts, except that for the Remainder of the District where it is practically the same, there is a satisfactory decrease in the number of deaths.

The classification of the causes of death, with their ages and the district they have occurred in, is given at the end of the report.

There have been 5 deaths from Zymotic diseases, viz., 4 from Diphtheria, and 1 from Whooping Cough, giving a Zymotic death-rate of .42 per 1,000. Last year there were 2 deaths from these causes.

There were 6 deaths from Influenza against 12 in the previous year, giving a death-rate of .5 per 1,000.

There were 4 deaths from Tuberculous disease against 15 in 1919, giving a death-rate from this cause of .34 per 1,000.

There is nothing in the other causes of death specially to call your attention to except that in the deaths of Infants under 1 year of age 5 were illegitimate: in the previous year only 2 were illegitimate.

ZYMOTIC AND NOTIFIABLE DISEASES.

During this year Measles is not a notifiable disease, and therefore the number of cases reported seems a good decrease, viz., 77 against 257 in 1919, but then there were 191 cases of Measles, so that there is really an increase of 11.

DIPHTHERIA.—There were 15 cases notified against 5 last year, viz., 4 at Seamer, 4 at Middleton-on-Leven, 2 at Yarm, 1 at Castlelevington, 1 at Nunthorpe, 1 at Ayton, and 2 at Stokesley.

The cases at Seamer and Middleton seemed connected with the school, but though the children were inspected by myself and later by the School Medical Officer, no unreported case could be detected: at the same time there was found plenty of room for improvement in the cleanliness of the school.

SCARLET FEVER.—37 cases were notified, compared with 7 last year. An outbreak at the Friends' School, Great Ayton, accounting for 29 cases, which were of a very mild type, the source of infection being from a scholar coming outside the district developing the fever a day or two after school opened in the New Year.

There were 29 cases at Great Ayton, 2 at Yarm, 1 at Stokesley, 3 at Potto, 1 at Hutton, and 1 at Battersby. One case at Potto was brought from Darlington, the patient commencing immediately upon his arrival.

PNEUMONIA.—12 cases of Pneumonia were notified against 31 last year, viz., 1 at Ayton, 3 at Yarm, 4 at Stokesley, 1 at Broughton, 1 at Newby, 1 at Seamer, and 1 at Hilton. This is the only notifiable disease that the Doctors have been at all dilatory in reporting, but as very little can be done to prevent the spread of the disease in this district no action has been taken.

ERYSIPELAS.—There were 2 cases notified against 4 last year, both were at Stokesley. It is often doubtful whether these cases are true erysipelas or due to inflammatory action from other causes.

PUERPERAL FEVER.—There was 1 case notified at Picton, against 2 last year.

ENTERIC FEVER.—We have had no cases since 1918.

TUBERCULOSIS.—9 cases were notified during the year, against 17 cases last year: 3 cases were pulmonary and 6 other forms of tuberculosis: 3 were at Great Ayton, 1 at Yarm, 4 at Stokesley, and 1 at Kirby.

The three Shelters for tuberculous cases are located at Yarm, Stokesley, and Ayton. The one at Yarm has been painted and stands in an ideal position just over the River Tees on the Eaglescliffe side. I am glad to be able to report that the North Riding County Council are making better arrangements for the Sanatorium treatment of these cases, both for the insured and uninsured, and also the children.

5 cases of Diphtheria: 4 from Middleton and 1 from Yarm, were sent to the Fever Sanatorium at Middlesbrough, and also 5 cases of Scarlet Fever, viz., 2 from Yarm and 3 from Potto.

The fees at the Middlesbrough Sanatorium have been increased, and therefore when possible the patients have been isolated at home.

I must express my thanks to your Inspector for the careful way he has disinfected the premises, and that the isolation was as perfect as possible.

WATER SUPPLY.

The water supply is practically the same as last year, and is chiefly from shallow wells which very easily become polluted.

At Stokesley, several wells have had samples of water sent away for analysis, and have been found unfit for use. At a joint meeting of the Great Ayton and Stokesley Parochial Committees to discuss the water supply of the two parishes, it was decided to request the Council to clean out the two public wells at Stokesley and submit further samples for examination. This has been done, and the West End well shows a slight improvement but the East End well is worse than before: the suggestion of the analyst is, "A better supply should be obtained, if possible." The matter is again in the hands of the Stokesley Parochial Committee for their observations and to enable them to take independent samples.

It has been suggested that the pollution of the wells is due to the drainage, which is probably correct. As I have pointed out in former reports it is not on scientific principles, there being no flushings for them, very little ventilation, on account of the gradient some have very little fall, and some of the joints are not perfect.

I cannot trace any disease due to the water, but if a case of typhoid occurred in the parish it might very easily spread through it: also it is not safe for anyone to build a new house because they would not be able to get a certified water supply. There are already about half-a-dozen new houses occupied whose owners might be prosecuted for not having a certified water supply.

I hope at the end of the printed report to be able to publish a copy of the various analyses.

At Great Ayton, several wells have been examined, and the reports on the whole have been satisfactory, except for the hardness of the water.

A letter of complaint was received from the Helmsley Rural District Council respecting the water supply at Fangdale Beck, Bilsdale. Your Inspector met the Helmsley Inspector on the spot to go into the matter. The three tanks were found in a very dirty condition, but they have been cleaned out and the water analysed and found to be of good quality and suitable for all purposes. The supply is constant.

The water supply to several of the farms in Bilsdale is unsatisfactory on account of the want of protection.

The Seamer water supply, which is privately owned by Lord Leconfield, is about to be sold on account of the owner having sold all his estate. A number of the freeholders at Seamer propose to purchase it, but I think it would be better for the Council to do so

as they are primarily responsible for providing a supply. It is a constant supply through pipes when looked after, though occasionally it may be the fault of the wind as the pumping is done by a windmill.

There is a constant supply of good water laid on to Ingleby Arncliffe and East Rounton from the Arncliffe Hills.

Yarm and a few houses at Kirklevington have a constant supply from the Tees Valley Water Board.

Complaint was received that a well at Picton Station was polluted. A sample was taken and the analysis showed the water to be unfit for domestic purposes. A temporary supply has been obtained from Kildale in a water tank travelling on the railway. Picton North Eastern Railway Cottages are supplied in a similar manner.

The whole of the public pumps have been kept in good working order. The one at Kirklevington has had a new case fixed to it.

SEWERAGE AND DRAINAGE.

There has been no alteration in the drains and sewers during the year, and they have needed very little repair.

The Sewage works at Great Ayton and Kirklevington continue to give satisfaction, also the disposal of the Nunthorpe sewage.

New notice boards to the approaches of Kirklevington Sewage Works have been erected. The tanks at these works should be covered to prevent anyone falling in, and there is also need of a shed for the attendant to store his tools in.

SCAVENGING.

Fresh contractors have been appointed during the year at both Stokesley and Yarm. At Ayton, there have been two fresh appointments, the first contractor giving his notice at the end of the summer months which is much the easiest part of the year, and to obviate a recurrence of this the contract is now made for a period of not less than one year. The work at all three parishes is now being done very much better than it has been for some time.

The contract for Great Ayton is £300 per annum.

The contract for Stokesley is £135 per annum.

The contract for Yarm is £130 per annum.

A tip for old tins, rubbish, etc., taken from Stokesley, has been acquired at Seamer Brickyard, at an annual rent of £2 a year, the Council having to fence it in and keep the fence in repair.

At Great Broughton and Hutton Rudby the Bye-Laws are in force imposing on the occupiers the duty of cleansing ashpits, cesspools, etc., but it is often very much neglected, as it is also in most of the villages.

Some of the larger villages should, in my opinion, have a scavenger appointed. The cost would not be much and it would prevent a lot of unpleasantness, as where there are ashpits in common for several occupiers, and it appears to be no one's duty to clean them, and there is often trouble from people who have left the towns and come to live in the country. They think everything should be done for them as it is in towns.

RIVER POLLUTION.

The disposal of the sewage remains the same as it did at the close of last year, most of the villages discharging into adjacent streams except at Ayton, Kirklevington, and Nunthorpe, where it is purified before being discharged into the streams. There are also purifying tanks at Picton, Ingleby Arncliffe and Seamer. There have also been new purifying tanks constructed at Busby Hall, White House, Busby, and Skutterskelfe Hall.

There seems very little likelihood of at present building new houses at Yarm in place of the houses that are at present unsatisfactory, and it would be a great advantage from a sanitary point to replace the privies with water closets. The disposal of the sewage would be easy as the River Tees is a tidal river there, and the drains would not require much alteration.

Your Inspector reports that the number of Inspections made during the year were :—

Scavenging, Privies and Ashpits	...	...	2,500
Dwelling-houses	...	...	150
Visits to Infectious Cases	...	...	175
Number of Houses disinfected	...	...	78
Number of Statutory notices served	...	...	10
Number of Statutory notices complied with	...	...	10
Number of Informal notices served	...	...	25
Number of Informal notices complied with	...	...	25

BUTCHERS' SHOPS AND SLAUGHTER-HOUSES.

These remain the same as last year, except that a fresh shop has been opened out in California, Great Ayton, for the sale of frozen meat; and a slaughter-house at Stokesley, closed during the war, has been re-opened. They have all been visited from time to time and have been kept in a satisfactory condition, and the animals slaughtered were of good quality.

Number of Slaughter-houses in use in 1914	...	27	
Do.	January, 1920	...	20
Do.	December, 1920	...	21

REGISTERED COWBYRES.

There are 29 Registered Milk-sellers in the District. The byres have been visited from time to time and found in a satisfactory condition, and are kept clean.

It is my opinion however that there are a few milk-sellers who are not yet registered, and will require reminding of their obligation to put themselves in order.

WORKSHOPS AND WORKPLACES.

These have been visited from time to time and found in a satisfactory condition.

BYE-LAWS AND NEW BUILDINGS.

Plans of the following New Buildings were approved of during the year :—

YARM :—

Proposed new dwelling-house for Mr. Albert Coates.

Proposed new shop front to Camperdown House, High Street, for Mr. J. Elcoat.

Proposed new dwelling-house at Follie Fields, for Mr. W. Allison.

Proposed new Parochial Hall.

Proposed new dwelling-house for Mr. Crispi.

STOKESLEY :—

Proposed additions and alterations to Tanton Villa, for Major R. H. Constantine.

Proposed new Lodge, for Major Constantine.

Proposed alterations of a warehouse into a cottage, for Mr. P. English.

GREAT AYTON :—

Proposed new outbuildings to existing houses in Cleveland Street, for Mr. J. Dixon.

Proposed new stable and pigsty in California, for Mr. S. R. Moody.

Proposed new wood office in California, for Mr. B. Pearson.

Proposed new bungalow in California, for Mr. T. Tait.

BROUGHTON :—

Proposed new cowbyre and stable at Kirby School Farm, Little Broughton.

Proposed new wooden bungalow in Kirby Lane, for Mr. T. W. Burrell.

HUTTON RUDBY :—

Proposed new cottage, for Mr. Frank Scott.

NUNTHORPE :—

Proposed addition and alterations to "The Box," for Gerald Cochrane, Esq.

Proposed new motor garage, the plans being from Messrs. R. Lofthouse & Sons.

KIRKLEVINGTON :—

Proposed new cottage at Far End Farm, for Col. Spence.

INGLEBY ARNCLIFFE :—

Proposed new farmhouse, for Sir Hugh Bell, Bart.

PICTON :—

Proposed Army Hut, for Mr. John A. Dodsworth.

DISTRICT NURSES.

I am pleased to state that another parish has obtained the assistance of a District Nurse, viz., Nunthorpe, and that she also works under the County Council in looking after the Infants and attending to the schools. I regret that up to the present no arrangements have been made to have a Nurse for the Bilsdale District, where I consider one is greatly needed, especially as it is situated a long way from any doctor.

HOUSING.

Your Housing Committee have commenced the work of making roads and laying sewers on the Ayton site. Land has also been purchased at Yarm, but the cost of laying the sewer from the site to the outfall and of constructing the purifying tanks will be a special charge on Yarm. This is most unfortunate as the amount involved is considerable and the ratepayers are already taxed to their utmost.

Houses are very badly needed at Yarm to replace some of those in those filthy yards which are both short of air and light. The yards are common to all the houses, and it appears to be no one's duty to keep them clean.

It is not proposed to take over the land at Stokesley at present, the greatest immediate need for houses being at Great Ayton, and it is hoped by building these first that it will relieve Stokesley, as there are several miners living at Stokesley and working at Ayton who would probably live there if houses were available, as they have to travel four miles or more to their work. I am afraid however that the rent of these new houses will be too much for a working man to pay.

During the last half of the year the Head Teachers of the various schools reported the names of the children who were kept at home on account of infectious diseases, except for a severe outbreak of mumps at Ayton and Hutton, where there were very many cases, viz., Mumps 150, Chicken Pox 20, Whooping Cough 12, Measles 5, and Ringworm 1. I am sorry to have to report that the vaccination of the District is not so thorough as it was during the outbreak of Small Pox in Middlesbrough, when we were the only District adjacent to the town that had not a single case: as long as there are no cases in the neighbourhood it is not so important,

but the great value of vaccination is shown by the report issued by The Chicago Department of Health, viz., "From 1899 to 1920 inclusive 3,565 cases of Small Pox occurred in Chicago with 167 deaths. Of the 448 vaccinated persons who took Small Pox none died. No revaccinated persons took Small Pox."

This, Gentlemen, concludes my report, which I trust will be satisfactory.

Your obedient Servant,

WM. M. YEOMAN, M.B.,

Medical Officer of Health.

STOKESLEY,

5TH APRIL, 1921.

Causes of, and Ages at, Death in District during 1920.

DISEASE.	All Ages.	Under 1 year.	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Stokesley.	Ayton.	Yarm.	Broughton District.	Hutton District.	Whorlton District.	Remainder of District.
Whooping Cough	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Diphtheria and Croup	4	...	...	1	3	2	1	2	1	1	...	...	...	...	...	3
Influenza	6	...	...	...	...	1	...	...	...	1	2	1	...	...	1	1
Pulmonary Tuberculosis	3	...	...	...	1	...	...	1	...	1	1	1	...	...	...	1
Tubercular Meningitis	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Cancer	14	...	...	...	...	...	2	1	11	4	2	...	1	2	...	5
Rheumatic Fever	2	...	...	...	...	1	...	...	1	2	...	2	...	...	...	...
Meningitis	2	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
Organic Heart Disease	22	...	...	...	...	...	1	6	15	1	2	1	4	4	1	9
Bronchitis	4	...	...	...	...	...	...	1	3	...	...	3	...	...	1	...
Pneumonia (all forms)	11	...	1	1	2	1	1	3	2	2	1	3	1	1	1	4
Other Respiratory Organs	4	...	...	...	...	...	...	...	3	...	...	...	...	...	...	1
Diarrhoea (under 2 years)	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	3	...	...	...	...	...	...	2	1	1	...	1	...	1	...	...
Alcoholism	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
Nephritis	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Parturition apart from Puerperal Fever	3	...	...	...	...	1	2	...	...	...	...	1	1	...	1	...
Congenital Debility	10	10	...	...	...	...	...	2	...	2	2	1	1	1	1	2
Violence apart from Suicide	4	...	...	1	...	1	...	...	...	1	...	1	1	...	1	...
Other defined Diseases	59	5	...	...	...	1	4	10	39	16	11	4	11	6	4	7
Causes, ill-defined or unknown	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
TOTAL	157	17	1	6	6	8	11	30	78	35	21	21	20	15	12	33

Analyst's Reports

on Water submitted from Wells in the Stokesley Area.

17, East Parade,
Leeds.

January 9th, 1920.

1st Report.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, December 18th, 1919.

Locality and Source :—East End Pump, Stokesley. Depth under 25 feet. No drains near.

Soil or Strata (depth and nature of) :—

Colour of Water, in two-foot tube, Lovibond's Units :—0.8 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	5.31
Nitrates equivalent to Calcium Nitrate	...	...	...	5.19
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	37.94
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	2.80
Total dissolved Solids (Dried at 100° C)				51.24
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.003

Sediment :—Small.

Microscopic Examination shows the presence of a few animalculae.

This water is not so impure as the other three samples, but it should only be used in the absence of any other of better quality.

The presence of over 5 grains of nitrates in the water from such a shallow well shows a great risk of pollution, especially after heavy rains, and if this water is used it should only be after careful boiling.

THOMAS FAIRLEY.

17, East Parade,
Leeds.

January 13th, 1921.

2nd Report.

REPORT ON WATER received from Stokesley Rural District Council, December 31st, 1920.

Locality and Source:—Stokesley East End Public Pump. Under 24 feet deep.

Soil or Strata (depth and nature of):—Sand and Gravel. Drain perhaps 6 yards away.

Colour of Water, in two-foot tube, Lovibond's Units:—1.3 Yellow.

Smell at 100° Fahrenheit:—None.

The Sample contains in Grains per Gallon (parts per 70,000):—

Chlorides equivalent to Common Salt	...	...	...	5.54
Nitrates equivalent to Calcium Nitrate	...	...	...	7.92
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	36.38
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	2.24
Total dissolved Solids (Dried at 100° C.)				52.08
(1) Containing Injurious Metals	..	...	...	None.
(2) Containing Ammonia	...	...	...	0.002
Containing also Organic Ammonia	...	...	...	0.003

Sediment:—Very small.

Microscopic Examination shows the presence of a few animalculae.

The proportions of chlorides and nitrates together with its very hard character render this water unsuitable for drinking.

Its use should be discontinued if a better supply is obtainable.

T. FAIRLEY.

17, East Parade,
Leeds.

October 29th, 1919.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, October 22nd, 1919.

Locality and Source:—Stokesley. From a well-spring at Dr. Yeoman's. Well 15 feet deep from surface of ground.

Soil or Strata (depth and nature of):—Sandy soil. No drains near.

Colour of Water, in two-foot tube, Lovibond's Units):—1.3 Yellow.

Smell at 100° Fahrenheit:—Faint earthy.

The Sample contains in Grains per Gallon (parts per 70,000):—

Chlorides equivalent to Common Salt	..	...	...	10.16
Nitrates equivalent to Calcium Nitrate	...	..	...	Trace.
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	47.80
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	6.44
Total dissolved Solids (Dried at 100° C.)				64.40
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	..	...	0.080
Containing also Organic Ammonia	...	...	...	0.100

Sediment:—Small, earthy matter, etc.

Microscopic Examination shows the presence of a large number of animalculae.

The proportions of chlorides, total dissolved solids and free and organic ammonia, together with the results of the microscopical examination, show this water to be polluted and unfit for use.

The water is simply filtered sewage which is percolating through the sandy soil from some leaking drain or cesspool.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

January 9th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority.

Locality and Source :—Stokesley, Bull & Dog Yard. Well under 25 feet deep. Drain near pump.

Soil or Strata (depth and nature of) :—Sand and Gravel Soil.

Colour of Water, in two-foot tube, Lovibond's Units :—7.0 Yellow + 1.5 red.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	7.62
Nitrates equivalent to Calcium Nitrates	...	...	...	21.44
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	27.78
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	3.92
Total dissolved Solids (Dried at 100° C.)				60.76
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.007
Containing also Organic Ammonia	...	...	...	0.007

Sediment :—Small.

Microscopic Examination shows the presence of a few animalculae.

The proportions of chlorides, nitrates and total dissolved solids show this water to be unfit for drinking or domestic use.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

January 9th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, December 15th, 1919.

Locality and Source :—Stokesley, Milburn's Yard Pump. Depth unknown.

Soil or Strata (depth and nature of) :—Sand and Gravel. Not known whether near drains.

Colour of Water, in two-foot tube, Lovibond's Units :—0.9 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	8.31
Nitrates equivalent to Calcium Nitrate	...	...	...	11.74
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	37.91
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	4.20
Total dissolved Solids (Dried at 100° C.)				62.16
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.002

Sediment :—Very small.

Microscopic Examination shows the presence of a few animalculae.

The proportions of chlorides, nitrates and total dissolved solids show this water to be unfit for drinking and domestic use.

THOMAS FAIRLEY.

17, East Parade,
Leeds.

March 17th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, March 8th, 1920.

Locality and Source :—Swales' Yard, Beckside, Stokesley. Under 25 feet deep.

Soil or Strata (depth and nature of) :—Sandy subsoil. About 6 feet from drain.

Colour of Water, in two-foot tube, Lovibond's Units :—1.7 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	9.24
Nitrates equivalent to Calcium Nitrate	...	...	...	13.66
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	35.90
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	3.36
Total dissolved Solids (Dried at 100° C.)				62.16
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.006

Sediment :—Small.

Microscopic Examination shows the presence of some animalculae.

The proportions of chlorides, nitrates and total dissolved solids show this water to be quite unsuitable for drinking or domestic use.

THOMAS FAIRLEY.

17, East Parade,
Leeds.

March 30th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, March 22nd, 1920.

Locality and Source :—Mr. Carrick's Well, Stokesley. Under 25 feet deep.

Soil or Strata (depth and nature of) :—Sandy Subsoil. Nearest drain about 3 feet distant.

Colour of Water, in two-foot tube, Lovibond's Units :—0.2 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	6.69
Nitrates equivalent to Calcium Nitrate	...	...	...	8.33
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	43.22
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	0.84
Total dissolved Solids (Dried at 100° C.)				59.08
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.004

Sediment :—Very minute.

Microscopic Examination does not show the presence of animalculae.

The proportions of chlorides and nitrates in the water from such a shallow well show it to be quite unsuitable for drinking or domestic use.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

March 30th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, March 22nd, 1920.

Locality and Source :—Wrightson's Well, Stokesley. Under 25 feet deep.

Soil or Strata (depth and nature of):—Sandy subsoil. Nearest drain about 6 feet away.

Colour of Water, in two-foot tube, Lovibond's Units :—0.8 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	9.01
Nitrates equivalent to Calcium Nitrate	...	...	...	16.39
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	..	..	...	33.12
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	5.60
Total dissolved Solids (Dried at 100° C.)				64.12
(1) Containing Injurious Metals	..	...	...	None.
(2) Containing Ammonia	...	...	..	0.001
Containing also Organic Ammonia	...	...	..	0.004

Sediment :—Very minute.

Microscopic Examination shows the presence of a few animalculae.

The proportions of chlorides and nitrates in the water from such a shallow well show it to be quite unsuitable for drinking or domestic use.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

March 17th, 1920.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, March 8th, 1920.

Locality and Source :—Durham's Well, Stokesley. Depth under 25 feet.

Soil or Strata (depth and nature of):—Sandy subsoil.

Colour of Water, in two-foot tube, Lovibond's Units : 9.0 Yellow + 3.5 Red + 3.0 Blue.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	..	11.78
Nitrates equivalent to Calcium Nitrate	...	...	...	21.85
Nitrites	...	...	..	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	28.53
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	5.60
Total dissolved Solids (Dried at 100° C.)				67.76
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	..	...	...	0.002
Containing also Organic Ammonia	...	...	...	0.012

Sediment :—Large.

Microscopic Examination shows the presence of a large number of animalculae.

The proportions of chlorides, nitrates and total dissolved solids together with the results of the microscopical examination of the sediment show this water to be quite unfit for drinking or domestic use.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

December 3rd, 1920.

REPORT ON WATER received from Stokesley Rural District Council, November 12th, 1920.

Locality and Source :—Mr. A. C. Bowes, West End, Stokesley. Abyssinian Well, under 24 feet deep.

Soil or Strata (depth and nature of) :—Sandy soil. Drain about 3 ft. away.

Colour of Water, in two-foot tube, Lovibond's Units :—1.0 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	7.16
Nitrates equivalent to Calcium Nitrate	...	...	...	1.64
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	33.78
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	3.36
Total dissolved Solids (Dried at 100° C.)				45.94
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.002
Containing also Organic Ammonia	...	...	...	0.004

Sediment :—Very minute.

Microscopic Examination does not show the presence of animalculae.

In its present state this water may be used for drinking, but the presence of over one and a-half grains of nitrates in the water from such a shallow well shows a great risk of pollution, especially when a drain is in such close proximity.

If used, the water will require constant watching. If a better supply is readily available, I should recommend that the use of this water be discontinued.

T. FAIRLEY.

17, East Parade,

Leeds.

December 3rd, 1920.

REPORT ON WATER received from Stokesley Rural District Council, November 12th, 1920.

Locality and Source :—Bowes' Yard, College Square, Stokesley. Well about 24 feet deep.

Soil or Strata (depth and nature of) :—Sand and Gravel. Drain about 6 feet away.

Colour of Water, in two-foot tube, Lovibond's Units :—0.4 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	5.08
Nitrates equivalent to Calcium Nitrate	...	...	...	6.69
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	33.05
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	2.80
Total dissolved Solids (Dried at 100° C.)				47.62
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.003

Sediment :—Very minute.

Microscopic Examination does not show the presence of animalculae.

The presence of over six and a-half grains of nitrates in the water from such a shallow well and in near proximity to a drain render it unsuitable for use.

I should recommend that the use of this water be discontinued.

T. FAIRLEY.

17, East Parade,

Leeds.

January 9th, 1920.

1st Report.

REPORT ON WATER received from Stokesley Rural District Sanitary Authority, December 15th, 1919.

Locality and Source :—Stokesley West End Pump. Depth not known.

Soil or Strata (depth and nature of) :—Sand and Gravel Soil. No drains near.

Colour of Water, in two-foot tube, Lovibond's Units :—1.4 Yellow.

Smell at 100° Fahrenheit ;— None.

The Sample contains in Grains per Gallon (parts per 70,000) :—

Chlorides equivalent to Common Salt	...	...	...	9.93
Nitrates equivalent to Calcium Nitrate	...	...	...	2.73
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	42.61
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	2.80
Total dissolved Solids (Dried at 100° C.)				58.07
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.003
Containing also Organic Ammonia	...	...	...	0.011

Sediment :—Moderate, Oxide of Iron, etc.

Microscopic Examination shows the presence of some animalculae.

The proportions of chlorides, nitrates and organic ammonia show this water to be polluted and unfit for use.

THOMAS FAIRLEY.

17, East Parade,

Leeds.

January 13th, 1921.

2nd Report.

REPORT ON WATER received from Stokesley Rural District Council, December 31st, 1920.

Locality and Source :—West Green Public Pump. Under 24 feet deep.

Soil or Strata (depth and nature of) :—Sand and Gravel. Drain 4 or 5 yards away.

Colour of Water, in two-foot tube, Lovibond's Units :—1.2 Yellow.

Smell at 100° Fahrenheit :—None.

The Sample contains in Grains per Gallon (parts per 70,000) :

Chlorides equivalent to Common Salt	...	...	...	9.00
Nitrates equivalent to Calcium Nitrate	...	...	...	2.32
Nitrites	...	...	...	None.
(1) Calcium, Magnesium, Salts, etc.	...	...	...	40.76
(2) Volatile and Organic Matter (lost by careful ignition)	...	...	...	1.68
Total dissolved Solids (Dried at 100° C.)				53.76
(1) Containing Injurious Metals	...	...	...	None.
(2) Containing Ammonia	...	...	...	0.001
Containing also Organic Ammonia	...	...	...	0.003

Sediment :—Very minute, on standing the water deposits a small quantity of oxide of iron.

Microscopic Examination shows the presence of a few animalculae.

Taking into account that this water is from a shallow well only four or five yards distant from a drain, I am of opinion that the proportions of chlorides and nitrates show that there is some leakage from the drain.

In its present state the impure matter is fully oxidised and probably the water might be drunk without bad effect.

Should the oxidation become at any time less perfect, the water would probably become unfit for drinking. The water is also very hard and if a better supply is obtainable, the use of this water should be discontinued.

T. FAIRLEY.

